

WHAT IS CLAIMED IS:

1. An illumination apparatus used by connecting an illumination head in which one or more light emitting devices are connected to a power supply circuit to a power source device, wherein

the illumination head has a current detection resistor for detecting current flowing through the power supply circuit, the resistance value of the resistor is selected so as to cause a voltage drop equal with a predetermined reference potential when a rated current is supplied to each of the light emitting devices, and

the power source device is provided with a current controller for controlling the supplied current such that the potential for the voltage drop caused in the current detection resistor is equal with the reference potential.

2. An illumination head in which one or more light emitting devices are connected to a power supply circuit, having a current detection resistor for detecting the current flowing in the power supply circuit, and the resistance value of the resistor is selected so as to cause a voltage drop equal with a predetermined reference potential when a rated current is supplied to each of the light emitting devices.

3. A power source device for supplying a power to an illumination head having a current detection resistor for detecting a current flowing to a power supply circuit in which one or more light emitting devices are connected, and the resistance value of the resistor is selected so as to cause a voltage drop equal with the predetermined reference potential when a rated current is supplied to each of the light emitting device, wherein a current controller for controlling the supply current is disposed such that the potential of the voltage drop caused in the current detection resistor is equal with the reference potential when the illuminating head is connected.

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